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ProLaser 6000
Easy To Buy, Easy To Use, Easy To Look Your Best.

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The Citizen ProLaser 6000 features an easy-to-use design, including everything you need to get started. It's easy to buy because everything's included. It's easy to use because you just plug it in and it works. And it's easy to look your best with lots of internal fonts and print quality that'll make you OOH and AHH.

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What is the Problem?

Software theft, software bootlegging, pirated or copyrighted software, software companies, business licensing software, not computer illegally.

There are five issues for software developers who make their living selling licenses to their software. It people are copying and using the software without paying for it, developers feel rightfully deprived of earnings, hence their anger.



How Big Are The Numbers?

The Software Publishers Association (SPA) in the U.S. estimates there is on the order of \$10 billion dollars worth of pirated software sold yearly. They estimate that, in the U.S. alone, there is \$5.2 billion lost. One estimate is translated this into the equivalent of 60,000 full-time jobs a year.

From the Editor

In Canada, the estimate is \$200 million lost to software piracy. Software piracy has been on a rise in spite of their companies having (legal) software on their. In some countries this figure could be just 50 percent.

Even if we question the numbers it is obvious to anyone with a computer that is full of this software piracy.

Who's Involved?

Obviously some 900 companies, leaders in the business, clearly legitimate entities, government offices, large, medium and small businesses and individual home computer users all participate in illegal software copying. In fact, on an international scale there are more countries that engage in the practice.

Who's Defending Developers And What's Next?

On the software, you have large and powerful U.S. lobby groups, MP and Business Publishers Association (BPA). In Canada, there is the Canadian Alliance Against Software Theft (CAAST), what's membership includes the

Intel, Lotus, Microsoft, Novell, Autodesk and Quarterdeck.

The tools available to software companies trying to protect their wants are marketing and awareness campaigns, policing tactics, and lobbying efforts against countries that do not have software protection laws. (The U.S. has threatened to, at least demand Mexico amend its Copyright laws do not respond).

In Canada, we have fairly stiff penalties for software theft. The Canadian Copyright Act was amended in 1988 to increase fines of up to \$1 million and jail terms of up to five years, but these penalties are rarely if ever applied. The police take the view that since they are between the software company and the violator and have not as yet proved charges in these cases.

The software companies represented by CAAST have turned to more aggressive techniques including obtaining a restraining order against you known as using software illegally. This kind of 1496-92(14) order is used to enforce companies into compliance. These orders rarely end up in court but afterwards in being out of court and out of business.

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In Canada, CAAST has legal support for Action Plan action which means that with a civil court order, CAAST can arrest a business provide and seize all of the computers and software as evidence. This can effectively shut down a business. Clearly on one, businesses are often willing to pay whatever is asked just to get back into business.

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Letter From The Editor

Continued from page 8

Education vs. Enhancement?

The team for the software review had done a spurious of marketing vs. policy, education vs. enhancement. Their analysis consisted with too broad tactics such as search times and search and secure methods. If CASE is perceived as being too expensive with its policy purposes, it may be the end of attempting policy education.

The kind of perception that CASE and the American SPA organizations are promoting tends to be a one-way street. One could easily ask: Where is the protection for buyers of bad or buggy software? Where are the software purchasers? This is not an argument for stealing software, but it is used by some to justify their actions.

Just Lower The Prices?

Some would argue that lower software prices and computer sales would be enough to make software the main driver of software. When you can buy high quality software for \$49.95, why bother stealing it?

While there is some evidence that cheaper software has an impact, many more people just wait until they perceive as the best program, regardless of cost.

What Are The Trends Now?

Of the U.S. countries are low, that problem is on the decline but will probably never go away totally. Besides the changing legal landscape, decreasing piracy, "copying is free" upgrade, software piracy from software stores, increasing consumer awareness of what

software is and how booting works, "not cost money" applications that only allow one instance of multi-users to run, better understanding by customers that they are really buying a subscription to software and the end of illegal software upgrades over time, high profile prosecutions, and better laws to protect software companies internationally.

What You Should Do If You Have Illegal Software In Your Company?

Right as wrong, CASE's efforts are not likely to end with the recent move against a group of Toronto HMO operators, and a business college in Ontario. To protect your business for the future, here are some suggestions if you or your company have been supplying the software.

- 1) Call CASE (800-456-6666) for their brochure on how to secure a primary.
- 2) Contact your own external software audit or suggest you have it.
- 3) Set up policies to restrict illegal copying in the future.
- 4) Set employee use guidelines to clarify that the only policy is to restrict illegal software.
- 5) Look for low cost alternatives. Perhaps use inexpensive words a copy of Lotus 1-2-3. Low cost, integrated packages can do the job of most software for \$200 and under.
- 6) Look for alternative and license alternatives. Pay your share for the license.
- 7) If you want to buy out lots of software, buy a CD-ROM and order a package of software or license down to try out the package you want to try.

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Canadian Product Launch Update

BY GRANT BUCKLER

This regular feature summarizes announcements of new products by international companies for the Canadian market.

(MS) — Microsoft Canada of Mississauga, Ont., has announced its Paradox 3.1 database software for the single microcomputers. Its suggested retail price is \$499, but the company is offering it at the special introductory price of \$134 through June 30, 1994.

Paradoxical Windows is scheduled to ship in February and will have a suggested retail price of \$199. Current licenses of Paradox for Mac and Paradox for other systems can upgrade to Paradox Professional database for \$199 through April 30, 1994. French and German versions are scheduled to ship in the second quarter of 1994.

Contact: Microsoft Canada, 905-896-9244

Samsung Electronics Canada of Mississauga, Ont., introduced its SpectraScan GL line of 34-, 13-, and 17-inch color monitors with proven saving features. The 17-inch SpectraScan (7-42) will list for \$1,399. The 14-inch and 13-inch models will ship later, at \$499 and \$399 respectively, the company said.

Contact: Samsung Canada, 416-645-5000

Dell Computer Canada, of Markham, Ont., launched the Quadra 540 and 540 desktop computers using Intel Corp.'s Pentium processor. Dell said the new machines, making up the second line of Pentium-based desktops, are available right away and cost \$5,199 for the 40-megabyte (MB) Quadra 540 and \$5,799 for the 44-MB Quadra 540.

Contact: Dell Canada, 800-764-0200

Inteltek Canada of Mississauga, Ont., said it is now shipping the first version of Inteltek 4, the new version of its document creation software.

Inteltek 4 will be available for Microsoft Windows and NT by the end of the first quarter of this year, Inteltek Canada said. The first version has a list price of \$2,999 with various options available at added cost.

Contact: Inteltek Canada, 905-879-1940

Computer Associates Canada of Mississauga, Ont., unveiled an OS/2 version of its Super Project project management software, as well as shipping CA Realis II, Workbench software used in developing applications.

CA Canada will ship the Windows and OS/2 versions of Super Project together for \$449. Upgrades and competitive upgrades are \$179 for \$49. CA Super Project users can replace the limited version of CA Realis II with a full version.

CA Realis Workbench will list for \$2,999. Users who already have Realis OS/2 can upgrade to the complete Workbench for \$1,499. CA is also offering a competitive

upgrade to users of real Micro Focus OS/248. Workbench for \$1,999.

Contact: Computer Associates Canada Inc., 416-670-0000 fax 416-670-0754

ScanJet, a device that allows a computer printer to act as a photocopier for machine, is now available in Canada. Hewlett-Packard Inc. of Houston is asking the retail for \$299 when it is set. It also includes a printer service.

ScanJet and other items, or return them for sale, or printing if the printer is not available.

Hewlett, 416-544-2000

Continued on page 11

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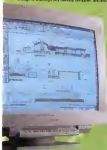
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regional, village, and town level, that institutional mechanisms for implementation involving the village government are necessary and the central role of the village, "it is possible that some of the work was being done faster ignoring what the village level is concerned to achieve (the village government is not the village government).



Table 1

[illegible]

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Warning: The newly-arriving *gallflies* were here amongst trees 10" (25.4 cm) in diameter, here up to 100' (30 m) in height, but not yet.

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Microcomputers	Software Standard	1989	\$24,750
	PC Computers	1989	\$4,950
Workstations	PC Workstation Config	1989	\$20,000
	Workstation PC	1989	\$200,000
Peripherals	Printer	1989	\$1,500
	Scanner	1989	\$1,500
	Workstation System	1989	\$20,000
Software Package			
Hardware	Computer Hardware Pk	1989	\$20,000
Peripherals	Modem Kit	1989	\$20,000
Workstation			
Hardware	Workstation System	1989	\$20,000

Power Requirements - Production Facilities Required:	1000	400-500
Price Advancement - Investment in Development Time to Market - Weeks	1000	100-200
	1000	100-200
Initial Results - Investment in Development Time to Market - Weeks	1000	100-200
	1000	100-200
Development - Investment in Development Time to Market - Weeks	1000	100-200
	1000	100-200

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REVIEW

Basic Sound Cards For The PC

BY PHILIP MOORE

You've all heard the hype and seen the ads. Now there's a sound card that can add spectacular sounds and music to your games, multimedia efforts, or even to Windows, installing a sound card in your PC has become almost a prerequisite of having a high-end system. It won't be long before they are bundled with all new PCs as a matter of course. If you are in the market for a sound card, though, it can be confusing deciding which to buy — there are just so many around now and they all seem to have features others lack.

This roundup of sound cards attempts to help you make your choice.

AdLib

It's unlikely you will find the AdLib being sold any more, but I include a few historical notes here. The AdLib was the first sound card on the PC and revolutionized the desktop computer world of DOS games. It was more, but no digital audio capabilities (but most PC games would be more).

After its release, AdLib was rather slack in developing the card further and was overtaken by rival compatible cards — namely the SoundBlaster.

Creative Labs SoundBlaster

This is the card everyone knows about — the most to cheap marketing and OEM board development has anything else.

The original SoundBlaster was basically an AD16 class, offering 16-bit 11.025 kHz stereo, with the added bonus of digital audio (also some early).

Game makers quickly saw the advantages of the digital audio system, and their support has helped make the card and its descendant models the most popular sound card in the world.

SoundBlaster (Deluxe)

The SoundBlaster (Deluxe) is actually the original SoundBlaster card (V.2) upgraded. This is a very straightforward card for the budget-conscious. It uses the same master PCM synthesis chips as the original AdLib and offers up to 16 simultaneous musical voices. (This means you can have as many as 11 notes playing at once, and it stores) music that resembles music playing any other notes.

The Digital Audio is outstanding compared to some of the higher-end cards, but probably adequate for games. It will output more audio at 16-bit than only 4 to 15 kHz sample rate to most playback can handle sample rates up to 48 kHz (44.1 kHz).

A pair of software comes bundled with the card. In the Windows version you get Creative

Wave Studio — a Wave editor replacing the edit.

and PCMT of other versions. This is a good program, with some effects like tremolo and time, though the lack of an Undo function limits it.

You also get SoundBlaster, a recorder which is not much different from the Sound Recorder already in Windows. It's a puzzle game with sound effects, (which is playing with this Talking Scheduler as interesting day-life application, with applications in living around reality by a choice in characters, and Manages, a text-to-speech converter which allows you to highlight text and have it read out through the sound card as an almost human voice. You can also define phonetic pronunciation for individual words using the dictionary.

— very close.

Some people complained about the lack of Windows software with earlier releases. This problem has certainly been addressed. One could argue as to the usefulness of some of the software, but there's no denying there's plenty of it.

For DOS users there is the Flat Impedance Driver, a DOS playback for some files (WAV files). A command-line text-to-speech recognizer which is great for use as batch files. (It's a kind of talking on-line program) and the even popular Talking Piano, which mimics when you tap into the microphone and inputs of you touch the keyboard, all interesting stuff in a generally out of way.

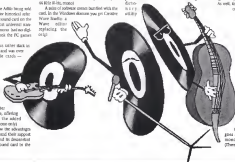
As well, there is a large of DOS utilities for converting between Creative Labs Wave files and WAV files, command-line playback for both CMF and MIDI audio files, and MIDIPlay, a multi-channel mixer player that allows you to combine several files with individual indicators for (U) files.

If you just want a sound card that will work with most games, and that gives plenty of functional software to play around with, then the Deluxe version of the SoundBlaster is a good buy.

SoundBlaster Pro

This sound card was released about two years ago and was seen as a major improvement over the original SB. The SB synthesizes two main notes and the digital audio recording now goes as high as 44.1 kHz to 16-bit mono, or 22.05 kHz to 16-bit stereo. (There are, on top, three versions of the

Continued on page 18



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The MEDIA

Sound Cards

Continued from page 15

your verbal commands via a microphone and have it respond automatically — look up, no hands.

As with the SB Pro, there is a CD-ROM included. At present only the Panasonic Multimedia type is available, but it works fine. The MIDI kit can be bought separately to attach a MIDI keyboard to the SB-Pro.

A control panel for controlling your own bank of patches and allowing the easily setup is supplied with the Waveblaster daughter board. This is handy if you couldn't use a 32-bit MIDI music device, and you can use as many of these setups to suit as you like (some banks, including MT-32, are supplied). The only problem is there is no way of understanding a sound as you can't actually hear what you are doing.

Also included is Creative's Approach, a cut-down version of Creative's own for what does which is one of the best MIDI sequencers on the market. The Approach version lacks some features, like MIDI sync control and multiple MIDI ports, but it is nonetheless an excellent entry-level sequencer.

With the higher end of the SB kit, you have to consider whether you really need this much soundcard. Futurebit audio is the worst of the future but unless you are into absolute multimedia or want to add a new CD-quality digital audio file, most other music differences. With the addition of the Waveblaster daughter board, through a quality Creative MIDI synth gives much better MIDI music for games and multimedia titles.

Media Vision

Pro Audio Spectrum 16 and Pro Audio Studio 16

The range of sound cards from Media Vision is not all that different to the Soundblasters, and as such, much of what I have said about the SB range applies to these cards. They share that even special place in this feature, however, because they are a much cheaper for the quality sound-card market.

The first Media Vision card was the Thunderbolt, which took creative and purposes was the same card as the Waveblaster line. There came the Pro Audio Spectrum (compatible to the SB Pro).

Neither of these cards are really available any more. The latest in the range is the Pro Audio Spectrum 16, which, as you may have guessed, is a response to the SB-16. It was the same CPU/FPU chips, providing up to 32 voices for music, and offers 16-bit digital audio to sample rates from 11.025 to 44.1 kHz in stereo CD quality. They are functionally compatible but only in name.

There are actually two different versions of the card — the Pro Audio Spectrum 16 and the Pro Audio Studio 16. The cards themselves are virtually identical, with the only difference being the bundled software.

With the Pro Audio Spectrum 16 you get Thunderbolt Pro, an excellent MIDI file player and recorder for DOS. Not to be confused with MIDI file, MIDI Organ file in the design and use the kind of important songs that use digital samples for their instruments and play on the digital audio version of the sound card. There is also a DOS MIDI sequencer, digital recorder,

music control, and the ubiquitous Waveblaster for Windows.

With the Pro Audio Studio 16 you get all of the above, plus a CD audio player for real-time playback. Recording, because the Windows for a MIDI sequencer and a good one it is, then, Thunderbolt, a music sequencer program with a test little digital microphone, and the superb Sound Impresario, a complete suite of multimedia tools.

Sound Impresario looks like a standard hi-fi deck and includes a MIDI file player, CD Audio player, Digital Recorder and Mixer. The Digital Mixer includes with the program in the box I have seen in a sound card bundle to allow you to add effects like Reverb, Chorus and Flute, amongst other filter effects, and more. It is a nice, stable, and a joy to use.

The Pro Audio cards are provided to reduce 32-bit processing and can 16-bit DMA for digital processing. As a result, the sound quality is excellent. They can come with a 32-bit CD-ROM sequencer and a MIDI broadcast file called the MIDI Suite can be bought separately. The only drawback is made a well-priced card that is a bit using the system for MIDI.

Lawrence

Just to modify the makers more, the Media Vision range of cards are also available under a different name and are marketed by a different company — ACS (Audio Creative Systems) — also in the range is the Lawrence's Cards — same as the original Thunderbolt, but with an added CD-ROM interface. Bundled software is Thunderblaster, a new edition.

Next in line is the Lawrence 16, which is identical to the Pro Audio Spectrum 16, except

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Today's Multimedia PC: The MPC Standard

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Today the PC is capable of creating, animating and displaying not only text and graphics, but also full-motion pictures, animation, stereo sound and three-dimensional images. It can do all this in an all-in-one fashion which video tape and television can not do. Television and video are known today to be passive media. They present information in a linear and non-interactive fashion.

The multimedia PC on the other hand can respond and react to a dynamic fashion according to the needs and interests of the audience. The modifications of this are quite dramatic. If you stop to think about the applications of this capability for training, educational environments, and presentations — especially presentations — you can't help but get very excited.

The ability is widely demonstrated while you are on the road — in many instances from delivery, the ability to instantly jump to different points in your presentation at the request of the audience, and the ability to adjust the speed of the presentation to fit the response or eliminate on particular points make this interactive presentation technology valuable.

The interactive multimedia computer is not only a more powerful medium than television, it may eventually replace it. The multimedia PC enables us to communicate better more naturally and faster.

Standards exist for the MPC (Multimedia Personal Computer). These standards allow hardware and software developers to write to a common denominator. The MPC standard is administered by The Multimedia PC Vendors Council, a subsidiary of the Software Publishers Association (SPA). Hardware and software companies can attach the MPC logo to their products if they meet the MPC standards, and of course pay the right fee. For the consumer it is nice to know that products that have the MPC logo meet all association standards.

The MPC standard is NOT the definitive specification for multimedia presentations. It is a low presentation products but to DOS as well as Windows. Though many hardware products do not meet every guideline set forth by the council, they are nevertheless very useful multimedia products. In the real, yes, the customer, eliminate the standards.

The MPC standard has received much power and capabilities of multimedia hardware and software. The first standard involved a 286 system which is barely out-powered enough for today's most hardware capabilities. The first set of standards, out early on, is called MPC Level 1. This is a low level multimedia system.

In May, 1990 MPC Level 2 was created, below MPC prices produced today will meet MPC Level 2.

The following are the key components of the standard:

	Level 1	Level 2
Platform	16 MHz 286C	20 MHz 386C
RAM	2 MB	4 MB
Storage device	20 MB hard drive 16 MB floppy	30 MB hard drive 32 MB floppy 10 MB hard drive 10 MB floppy
Audio	16 bit 11 kHz, 16 kHz	16 bit 11 kHz, 16 kHz, 20 kHz, 44 kHz

Video	RTG 8 bit or VGA 480K colors	
SuperDisk	100 MB or 120 MB	
CD	Standard 740K or 800 MB CD-ROM	
Joystick	Joystick or 1 MB D	
Configuration	Windows 3.1 or Windows 3.2 with Multimedia Extensions (add 1 MB D)	

Today, any 386 computer is at least capable of creating and running multimedia presentations in the minimum suggest. As a rule of thumb, however, it would suggest creating your presentation using an MPC Level 2 system or higher. The playback monitor for most of your presentations will be fine at the 386 Level 1 specification. However, with

advancing technology and today's price I certainly would not buy anything now that did not meet or exceed the MPC Level 2 spec. Today you can buy an MPC Level 2 upgrade kit, which includes a sound card, speakers, and other peripherals for under \$1,000. You can buy a fully loaded MPC machine for under \$3,000.

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mouse driver." What? It was just running Windows with a mouse a few months ago? Windows, for those who don't know, requires 33 and above drives, which can often run about 200 of previous memory! Besides, some people are looking for the ALL mouse driver disc, install it back, for Windows. Launch it from DOS again. Type, type, type.

Are we having fun yet? Things are looking good! This time I get to the main menu. But oh! That's a lot of choices. Well,

what a deal! A new model of Postal Painter comes like this. I think it's because of the choice when message "Requires single-player display with at least 256 colors." What the heck is a single player display? The choice is to go back out to be Windows for Windows says it is, so which we had recently updated, it had disabled the 256 color ATI driver that had previously been installed and enabled its default 16-color VGA driver instead. Later Windows, Video Red Windows, type type type.

Finally... Windows! It's running! The shell is launching Postal Painter. I sat Patient. It's back to the shell! This is pretty silly after all, I'm thinking, as I launch another driver at a time. There, how does that look for the PCI driver. Why have my screen color gone blank?

The story goes on and on, in that sort of hysterical way that makes people TV movies. Unfortunately as a doctor and, in order for me to play my PC maintenance but for I have had PC maintenance in my experience, leads to this way. If you are considering to using an IBM-compatible platform, your best bet is to purchase a machine (personal or for business), such as one of the IBM Ultrastar systems. Many of the problems are directly related to DOS. If you choose to run, say, DOS 3.3, you would solve some of these problems (especially the non-compatible ones) and possibly substitute a whole new set of problems. Now the machine software might stop working, your sound card or network system might not have an OS/2 driver or the disk system might not work, coming from IBM fully supports OS/2.

If you are wise or lucky enough to have a decent little PC, you can set up a properly equipped and configured multiplatform PC system, and I find that it is possible to end up with a system that is relatively trouble-free. A good all-around PC, then, plenty of CPU speed to drive direct multiplatform personal computers with high-quality cameras, graphics and sound. It is the configuration that is the deal here, especially an IBM (or equipped) PC, which will also require good OS/2 software as opposed to dealing with many add-on to control OS/2 images, memory addressing and other PC mistakes.

Members with bases based on IBM or Microchannel architectures (Apple's Macintosh Series, Amiga's Series II or III, or Intel's



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own PC) standard do not have to be manually configured. You just plug the card in and it works. Because multiplatform is a hardware and configuration intensive, I categorically recommend one of these solutions.

Macintosh Multiplatform

The Mac's design is a bit of a user interface. It is the Mac's probably simple. A and Macintosh-enabled Mac, such as the Quadra 6400 or 6400X includes, at least essentially everything necessary to install and play back audio and video with a computer. The audio and video connections are built right in. The Macintosh supports 16-bit sound, animation, Photo CD and image compression of the system software level. So don't be little chaper of better there. If the model is equipped with a built-in OS/2-ROM drive, then's nothing to set up there, either.

Basically, yes, right? The only trouble is that video playback performance isn't all that fast - even on the fastest Mac. Don't expect full-screen - or even full-screen - QuickTime movies to play back at reasonably decent rates. If you want full-screen/full-motion video, you'll have to choose an additional \$1,000 or so on a Macintosh plus and get a third-party video system such as Realizer VideoVision Studio.

Generally, a PC is a better choice to deliver

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Multimedia on Your PC

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is assumed presentation tool costs, a 300 megabyte is a good way to deliver presentations, while a 160 is a better choice to build files.

There's plenty of software and hardware available for both ends on both platforms.

Graphics

Despite my complaints and reservations about many of the above mentioned products, I have used a large number of multimedia tools over the past few months while researching this article. Here are my conclusions:

PC Multimedia

Best for development of business presentations.

Hardware

Look for a PC (or compatible), if possible, equipped with the following:

- Sound Board (or Sound Blaster 16MB compatible sound card). Although there are now the best sounding cards on the market they are widely supported.
- A/C power options — preferably with two separate inputs, each with independent volume control. Recommended: Alesis, Lexicon.
- Double speed, Photo CD-compatible CD-ROM drive. Drives equipped with an SCSI interface are faster, but cost a little more. Recommended: type of the drive drives from Toshiba, Sony, Teac, NEC, Tascam, etc.
- Video digitizer with on board image compression implemented in hardware. The video digitizer should not require the use of a "PDA Picture Connector" (recommended).
- If you need to create video tapes, you will eventually require a video card or box that supports PAL or even better, DVDR-200, portable output. Note that this does not necessarily imply that it will be broadcast quality video output — in even cases the recommended Am VideoCity.

Recommended Software

MacDraw 6.2 (PC) — for PC users who have difficulty with presentation.

Windows for Workgroup 3.11 (PC) — best choice for Windows 3.1 users. It supports the hardware, improved file manager and other essential features over Windows 3.1.

CardDraw 6.0 (PC) — a good all-in-one graphics package. Including animation, presentation, charting, clip art, fonts, page and document creation.

Adobe Photoshop 3.0 (PC) or 3.0 (Mac) — for digital video editing.

Adobe Photoshop 3.0 (PC) or 3.0 (Mac) — for digital video editing.

HyperCard — SuperCard (Mac) — either will be a good choice for producing multimedia presentations. SuperCard is more expensive than HyperCard, but worth the extra.

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Presentations

Continued from page 30

make a dramatic point is to, but avoid using it consistently on all screens.

Color is also critical to establishing continuity and differentiation in a presentation. It can tie common thoughts and develop a cohesive hierarchical relationship, but a presentation that a publisher several different product lines, each product line is given its own color scheme. Within a line color scheme is emphasized, a sign to the customer a new product line is being presented.

Colors make subtle, subconscious statements.

Colors make subtle, subconscious statements. Blue is loyal. Blue is formal. Gold is rich. White is pure.

Color is often used to evoke certain emotions in people, such as:

Red: danger, sex, excitement, hot

Dark Blue: rich, luxury, mature

Light Blue: youthful, masculine, cool

Green: growth, positive, organic, go

Black: pure, clean, formal

White: clean, pure, formal

Grey: neutral, formal, clean

Yellow: warm, happy, clean

Orange: warm, happy, clean

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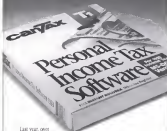


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Personal Tax Software

BY FRANK WILLIARD

The pain of filing your income tax may not be as bad if there's a really slick program to help you fill out the forms.

N ot only did paying taxes, but almost everyone who needs The Computer Paper does trying out new software. That was the case I had when I sat down to compare three popular tax preparation programs, CanTax, HomeTax, and ProTax and I admit you may not have heard about The Made Easy.

The editor thought that creating my computer wrap issue was that maybe one program would find a better tax break than the others. Some little history part of the Code that would save me a few bucks.

If that's what you're hoping for, you'd better go out and hire a Chartered Accountant, because these programs are regulated by the Revenue Canada to come up with the same answers. They may help you get your return faster by letting you file early, but I'm a bit.

The difficulty was in making the computer file big because each year has provincial computer codes and with improved versions and all of the new ones were on the market when I was writing. As a result, I looked at all four programs for last year (1993) as well as HomeTax and HomeTax for this tax year (1994).

Not surprisingly, since they're all locked by doing the actual filing, they have quite a few operating limitations on software. For example, they all produce spreadsheet output once-over data when necessary, make sure your forms and your printer are updated for the best results and have an extensive database.

What makes them a joy to use is that when you enter the figures, they do the work. Adding other things, you can figure about figuring out the Provincial Income Tax on

taxes. This little bit of personal pushing is handled by all the programs instantly, allowing you to get to the refund box (line 404) in double quick time.



HomeTax
Brian Connolly HomeTax Plus is published by Information 2000 Inc. A member of the last key group of companies in Toronto. It comes with two floppy disks, a 144 page manual and occupies 2 MB of disk space.

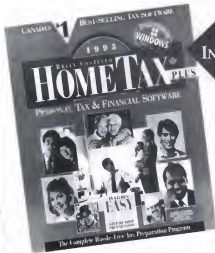
Like three of the four reviewed, it's a DOS program, and uses ASCII graphics, so it looks and feels rather like a late model DOS word processor, but it is Multitasker with drop down menus from an upper bar across the top of the screen. There's nothing wrong with the home personal point of view, but it will still suffer compared Windows users at speed at operation.

Over the number crunching, HomeTax, HomeTax Plus. The four pages of the T1

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*"I find Home Tax Plus the easiest program to use and
the question and answer format helps to ensure you
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RICHARD MOROCHOVE - *The Toronto Star*

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General form are set up as four screens with the same standard form is shown put out for Revenue Canada. An "Interview" option, walks you through the form asking questions and generating screen as you go along. The supporting material, such as your T4 slip, are separate screens, accessed from a main menu. An "override key," also allows you to bypass the Interview calculation if there's no disagreement.

HomeTax will import Quicken data directly, supports 80 pointers and includes a financial planning function and a calculator that will perform simple calculations. Perhaps the best feature is its "Print" function, a tax alternative worksheet. This shows the basic entries on the T1 tax form for three different scenarios side by side. If you're considering an RRSP contribution, you can see exactly how it's likely to affect your bottom line.

Altogether, HomeTax is a solid computer program that has an excellent planning and scenario building capability. Any difficulties with its DOS interface are easily overcome with its Interview function and easy to understand manual.

New to the 1993 edition. The Interview function has been improved and renamed "Tax-Walk" and the last two of the data spots needed is 4.5 MB. If you buy it, check to see if you have an "Early Buy It" version that requires you to mail away for a free upgrade to the production version. A Windows version may also be in the stores when you go to look, but was not available for review.

CanTax

CanTax personal income tax software, published by CanTax in Calgary, is one of two major offerings produced in Alberta, and is very popular on the west coast. A question I left on a BBS in Victoria showed CanTax was really the third package program tested based members.

It comes with two floppy disks, a 70-page booklet, and 100 pages of memory and occupies about 2.5 MB of disk space. Like HomeTax it has just down stream but it differs in that it's laid out in scrollable form. The most one is the lack of interactivity. Required, which puts all the forms, schedules and other calculations in a typical order from



top to bottom. Each line can be expanded into a form and then entered again.

The second key point about CanTax is that it has a built-in diagnostic function that offers warnings and reminders of when you should enter and when you should print to your return. If you start choosing a standard tax credit, for example, the diagnostic screen will point this out.

Throughout there is a context-sensitive help-function under the "Help" key which can act as an easy link. In other spots, packaged to see what's in it to get the software or CanTax to get program help.

CanTax also has its own Bulletin Board at (403) 252-1243 for software support, tips and ideas, which I thought was a great approach.

Tax Made Easy

This is the third among the CanTax's. Tax Made Easy, produced by La Motte Software Inc., 2614 Ridge St., Victoria, BC V8T 4P9, comes on one floppy and has a two page manual that is quite an easy piece of paper.

Despite this on previous because of its, it's a remarkably easy to use. Just enter the amounts and the program will take right off the floppy. The screens are very plain but the questions are logical and straightforward and the information easy to fill in.

Navigating is simple. As you move down the list, you'll see the highlighted fields in red. If they don't apply, Make a note (note) Under the following figure and enter it again. Any problems? Just ask at the bottom of the screen for what to do next.

If ignoring most of the more obscure filing forms and including all eight schedules needed to produce a T1 personal income tax return Tax Made Easy really does make it easy. It doesn't have much help, a manual, a calculator to say what and whether, but it does the same jobs as the others and takes less time to do it. It also gives the whole form on one screen. Canada approved style that you can send in with your T4 slip.

Tax Made Easy is available for P.C., Apple II and Commodore at \$29.95.



WinTax

WinTax is the other Alberta based tax preparation software, produced by WinTax Software Corporation in Edmonton, which is owned by La Motte, the makers of OptiView. It is the latest application of the firm, a sleek, comprehensive Windows program that, this year, is more easily used.

Input the software, except Tax Made Easy, which for between \$30 and \$40 WinTax will be going on the shelf for \$29.95 and will contain a manufacturer's made order coupon for ECU making the effective price \$19.97.

WinTax comes on one floppy, has a 104 page manual and occupies about 2 MB in disk space. It's installed from inside Windows and sets itself up in its own Windows group.

Once a new file is opened, you can wonderful assist implications of the Revenue Canada tax forms and get a printed form from

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The New World Of PC Spreadsheets

[illegible]

As we move into the mid-1990s, the world of spreadsheets is taking a dramatic leap forward. With new products and significant upgrades to old favorites, number crunching is getting easier for the novice and more power and flexibility can become available for the advanced user.

There are many spreadsheet developers, but each released new versions of their products. These include the latest Lotus 1-2-3 Release 4.0 for Windows, Borland's Quattro Pro 4.0 for both Windows and OS/2, and Microsoft's Excel 3.0

It is well known that products from Communist countries will soon be prohibited from being imported in Italy 1994. Since 2000, in a Windows version of the former China 2000, the products in this list will be sold through the state-owned entities (SOE) and targeted to companies that have a mix of PC, FAX, and other communications.

The second Co product, SuperColor V for Windows, will provide the same functionality as the current SuperCalc V, but look just a bit different. Comparison illustrates attempts to regain some of the lost market share in the spreadsheet world.

^aThere are no observed non-zero coefficients for


putting a lock on the spreadsheet market. With their graphical user interface, ease of use and advanced features, Windows spreadsheets are now a dominant force. While the IBM products will still co-exist for a number of years, there will be upgrades to major products such as Lotus 1-2-3 for IBM, the clear, no-risk recommendation.

Authors: **Chen, Y.** **Editor:** **Chen, Y.** **Page Count:** 10 **References:** 10

Without a doubt, multi-dimensional modeling software is an exciting world for systems developers. Lotus Impact and Co-Complete go well beyond the three dimensional limits of traditional spreadsheets and three dimensional products provide the ability to change spreadsheet views dynamically and allow the user to view data in new and creative ways.

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<p>Microview's latest Mouse (new 160) \$35</p>		



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5.000 5000	Color	4	\$2599
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OPINION

Borland Works Toward Natural Workgroups

BY DAVID TANAKA

Borland's latest products — *Quattro Pro 5.0* for Windows operations (reviewed elsewhere in this issue) and *Paradox for Windows* database software — are available in single user or workgroup editions. In the workgroup versions, Borland has implemented its unique interpretation of what a workgroup consisting of many users.

The terms "workgroup computing" and "groupware" have entered computing's lexicon with extraordinary security. They refer to a class of software and user capabilities in existing software that promise to change the way users work on networks and across multiple networks. For example, groupware would enable users to collaborate simultaneously on a single project — located in a word processing document or a spreadsheet file, for example — each from his or her own computer.

The mechanics of sharing and distribution were addressed early on by network operating systems, distributed software, and network hardware. If computer industry has taken out of the data to connect PCs together.

What is causing us to address the way people work with each other across a network, however, the tools have been much closer to coming. The software that people use and the way they produce work on the network isn't that much different from the

way things are done on stand-alone PCs. For many users, file and printer sharing and e-mail are the main impact of networks.

Some companies certainly focus with us on this, probably the best-known workgroup environment in any way, use the network as a means of providing an opportunity for truly collaborative work, where the workgroup's product could be something greater than the sum of labor at the individual workstation.

But let's take an approach like the latter end with Netscape. Netscape has said, with a mouse, workgroup computing should be an "instant" extension of the way people already work. It should be a simple extension of an old way of working on the LAN, it should be based on the LAN. It should be a direct path into new methodologies.

In its white paper on workgroup computing, Netscape says that workgroups should grow naturally from individual desktops and individual needs, and should require additional investments in hardware

or groupware. People should be able to go to workgroup computing using the applications they are already familiar with.

To implement this vision, Netscape has introduced *Object Exchange*, a workgroup engine that the company calls enables users to share beyond and across to share object such as a Fox data table or *Quattro Pro* spreadsheet page.

The sharing can take place among users on a single LAN or across LANs. A general *Object Exchange* is compliant with specifications for MCI Mail, Serial Mailbox Message Handling Service (SMHS) and Network Object Interchange (NOI). Microsoft's *InterApplication* (IA) programming interface (IAPI) and works with most popular

LAN software. In the future it will support the *Vendor Independent Messaging* (VIM) standard.

"Being a network-oriented should be, you share whatever the data you want, whenever you want, with whoever you want, wherever you're located," Borland notes in the white paper.








The methodology to activate *Object Exchange* is "Painted and Subscribed." A published object from Apple's *System 7* publishes grants access to a *Quattro Pro* spreadsheet page by "publishing" it through *Object Exchange*. Users can "subscribe" to that object by entering the page into their spreadsheets.


In Borland's workgroup-oriented version of *Quattro Pro* and *Paradox*, the *Object Exchange* function is built in, along with a new window called the *Workgroup Desktop*. The *Desktop* comes with a menu bar for "subscriber" in *Paradox* that allows click-click access to the *Object Exchange* service.

Later this year Borland plans to introduce a *Workgroup Building Kit* which will allow access to the *Object Exchange* applications programming interface (API). This will allow software developers to implement *Object Exchange* in their applications. Borland also claims the kit will allow power users to implement *Object Exchange* in existing programs through the program's macro language. ■

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The terms "workgroup computing" and "groupware" refer to a new capabilities in software that promise to change the way users work on networks and across multiple networks.



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The QuickTour

BY DOUGLAS ALDER



The Do-It-Yourself-Ited This doesn't had to go to 5th floor and Co. the makers of Pro-Video. It was on hand to show off its latest product, a program that allows you to create and edit digital images.

Remember: Make sure you have the right way and flipped the corners of the book, you would not see an estimated person running a tripping on something.

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Although it is still under construction, Apple Computer was showing its newly announced eWorld international data service. Similar to America Online, or CompuServe, the system features a small town metaphor to guide users through the net.

Contact: Apple Computer 410-606-2021

Some introduced TextBridge, one of Apple's new Optical Character Recognition packages. The big news was the price—\$29.95. They are pricing it like a utility, rather than an application package, much in the tradition of competitors like Corel whose competing product sells for \$299.95.

Contact: Macro Imaging Systems 800-877-2820

The best computer desk I have seen yet was an amazing find at a company called **Wheeler Day**. It was a light-colored, solid (no) veneer desk. Everything was built-in. You could hide a printer in the bottom drawer - or a notebook on the top drawer. There was a smooth support arm and wiring hidden away. Very nice, not cheap though. US\$1,600 plus about US\$40 to ship to Canada.

[illegible]

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SELECTED SYSTEMS	486DLC-40 w/25MB cache	486DC-33 w/25MB cache	486DC-33 w/25MB cache	486DC-48 w/25MB cache	ENTRUM 40 w/25MB cache
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[illegible]

Parsons, long their manufacturer of structural products for the firm, has come out with a way to design-chain structures using Fibredex.

Up to now, this was possible with standard cable like kind of wire that you could use in a company car. But not with Bluetooth wire (which looks like old-fashioned telephone wire). Previously you had to come into your apartment carrying a dish, which acted as the receiver. Those connections are priced comparably with other Bluetooth models.

[illegible]

NOTE on the interesting Hox-like-based role played by *Wnt1* in the formation of the jaw.

Price graphics and a user-friendly interface combined with discounts and sales are easy to master. In tonight's class is \$19.95 monthly which includes two hours of screen time. Additional time is \$2.99 an hour plus screen. They are working on getting it evenable to Canada for better rates as well.

[illegible]**SHORT LINES** / **WILLIAMSON** / **JOHNSON**

These sturdy, heavy-duty induction ovens are designed for busy managers' offices and feature extra-wide doors, removable shelves, and a built-in timer.

No Hands Software Ships Common Ground For Windows

HELMONT, CALIFORNIA (PC)—No Hands Software filed the latest salvo in its ongoing battle with Adobe Systems in the electronic document distribution market, by shipping the Windows version of Common Ground this week. The company claims that the product is "the first commercially available, cross-platform competitor to Adobe Acrobat."

The firm maintains that Common Ground 1.0 for Windows retains all of the important features found in the company's Macintosh version, which was shipped in May 1993. Features include an embedded font, compact WinFiles, and just for fun

draw program that lets users "convert any document to an exact representation of the original that can be viewed, searched and printed by anyone regardless of application, computer and fonts."

Two major competitors make up Com-

mon Ground, a Mirror and a Viewer. The CD Mirror converts any document from any application to PngalPages, a platform-independent file which can be viewed and printed by anyone with a Common Ground Viewer. The Common Ground Viewer features

copy and paste options, text searching, zoom capabilities, navigational tools. OLE 2.0 can be supported and on that today. The software is currently running and getting only

Common Ground the Windows requires. Continued on page 37

Common Ground
also acts as an OLE 2.0
server, providing
"seamless" integration
into other applications.

of fidelity to the original document. The product also offers full Postscript support, JBig (Joint Photographic Experts Group) compression, and the ability to save documents in any popular word processing format or setting.

The company says that Common Ground also acts as an OLE (object linking and embedding) 2.0 server, providing "seamless" integration into other applications such as electronic mail and databases.

In addressing the allegations, Two Banners vice president of marketing at No Hands Software said, "Common Ground users can read documents with confidence. They can be stored and printed because Common Ground lets them create a small file. WinFiles, which runs on a minimal system configuration. Also, Common Ground users can always count on an exact representation of their original document because Common Ground works with such all sort types including StarType, Postscript and Information character sets."

The company claims that in common Adobe Acrobat requires that viewers be installed everywhere a user wants to read a document.

No Hands says it has incorporated "font-packer" (except font-packer) process instead of into Common Ground 1.0 for Windows to provide full Postscript support. Users can also "embed" Common Ground documents from any Postscript file, so users to get documents from other platforms into Common Ground's platform-independent format where they can be viewed and printed.

Builds JBig compression is also included for compressing continuous tone gray-scale and color images in order to reduce the size of files.

According to the company, Common Ground is an electronic document client-

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The Computer Paper Makes A Pilgrimage To The Winter Consumer Electronics Show
In Las Vegas And Discovers, Among Other Things

MPEG's Just The Thing To Make A Player of A King

BY HARI SINGH BHALLA

Desktop Teatime — The Consumer Electronics Show (CES) was again dominated by the games scene. Sega and Nintendo filled one pavilion by themselves. Publishers gave and snail for their systems dominated one other hall.

The computer world also had a significant presence in the current generation of the "multi-billion-dollar" industry. Several new scores of new multimedia titles have computing heavyweights like IBM, Compaq, HP, and Intel played to the CD-ROM market by committing significant resources to the show.

On the game side, Sega showed its existing hardware, the best of which is the Sega CD and 16 others were also shown. Sega's 32 bit machine, I missed them. No question Sega leads the game-play market in the time frame.

By comparison, the 32-bit and Supermode models of Nintendo seemed less in line, not quite current, yet not quite over-the-top.

If I Wanted One

My job of the "player" machines at CES is the Atari Jaguar. It comes very often recently shipping game until just like the Atari Lynx series every other currently shipping hand-held game.

And the price is right (\$1299.99).

The graphics quality suggests the competitors, even 3DO's (at \$299.99).

It's a pity the jag will suffer the fate of other Atari products in next year's lack of support and market share. Want proof? Compare the list of software publishers who are supporting the Jaguar vs. those developing for SNES, Super32X, and 3DO. It's no contest.

3DO's Message

3DO's media tag was extraordinary. I reported that Brian I didn't reject but the quality of the device coming on board of 3DO Real Multimedia.

In a word, it was underwhelming.

3DO is good. It's just not good enough to justify the cost. Fortunately there are many applications for which 3DO's are well suited. For example, someone will sell the ability to install wordbook, games to go along with the cellular phones to it. I certainly hope that 3DO leads some of the next-generation, it only because one likely alternative is 3DO's. Let's not hate. All the talk in the plane, but just the size under stress. Besides, 3DO's sound is very good.

But 3DO in my home? Not if there is something better. And there is.

MPEG

On a couple of 3DO units that were prototype MPEG boards (expected cost in the \$300 range, available this summer) boosting the machine's capabilities. I took a little while to see the MPEG machine running side-by-side with a real MPEG 3DO unit (left a contract). Now this is real! Maybe it was the lighting, maybe it was the

moment, but the full screen display of these two units was outstanding. In long to develop, play full-screen video for long to play. Quick from "Wind over" Add it to this 3DO's great sound and it would keep the level of quality. But would it buy a stand-alone unit to use it on? For \$3299.99?

Ben Clark, What's Behind Door Number One?

In the early hours of the Nintendo exhibit was a video loop of 3DO's Ben Clark, Project Project Reality (3DO engineered and 3DO Nintendo of the future). Around the loop were two fully development units and one Project Reality prototype.

Now I'm partial to what a smaller group can do with an SGI development machine, but so what? This is the year running on the prototype showed promise. It took a close look to the 32 and future. But work that has made Ben Clark's machine from

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THE PREDATOR ARRIVES: Interactive is a unit that changes audio signals into commands that are fed through pins on the front and back of the device.

But Predator 3000's superior graphics won't be enough to make up for lost time. Even if it comes in at \$600 (000), it's still a lot more than the \$350 (000) of the same machine. It will struggle against the current hit titles from North America this year.

The Predator Approaches Shallow Water
All Other Games Flounder in Deep Waters
The computer-based games and peripherals

products shown in our review of CES will mostly sit at the game developer for 300 days. However, the [ag] and all the other players that filled gaming parlors at the show.

Why? The number of US and Canadian households with children under 14 that are purchasing their last computer makes the market purchasing their first game machine in a growing margin each month. Of the game machines, the king of the hill for sure

was the Sega CD. But its sales are probably compared to sales of 1.2 million equipped computers.

It is estimated that by the end of this year 30 percent of all North American households with children will have computers with CD-ROM drives. That, too, is a no-brainer.

The Jaws of The Console Provider
To satisfy the rising demand there are lots of new multimedia and interactive titles in the works for the coming year. Many of the good ones incorporate MPEG compression, requiring special hardware.

MPEG boards for PCs are available now and cost under \$100. The quality of the MPEG titles outside their sister division just as good with the MPEG audio interface without much cost. And in a shocking departure from the industry of most new PC technology, the existing first generation MPEG boards work well.

Will the public buy yet another add-on for their computer system?

Out On The Limb We Go

Predator 3000 — Intergraph Inc.

The increase in storage capacity, as well as improved full screen video quality will make MPEG the standard video compression format for the foreseeable future. It is the gold standard.

Does this mean that all of the console developers turn jumped to and jump on the MPEG bandwagon? Certainly not. Choice of video compression is not only a matter of the increasing difference for developers. They all need a growing market. But which console will they choose? 3200 with its virtual MPEG? MPEG-2? MPEG-3? CD-ROM? The

development of event purchasing patterns say MPEG or SegaCD. But will those formats dominate the enough into the future to make up for a 10 month development time for new content? And how many developers can find \$100,000 - \$1.5M required to bring one title to market?

Predator 3000 — Intergraph Inc. This publishing will look like back publishing at price to 100.

Developers will go for multiple platforms by relying on the controls of established platforms. Companies like Sega-Play, Philips Interactive, and Sony Interactive will more or less stand the pack on each new line. A review of CD-ROM "releases" of 100 in the first half of 1999. First Japan, then US.

By doing so they will establish their own in having the time to make titles in multiple formats. And the console they will likely choose? MPEG or CD-ROM?

A few authors have the Microsoft format and Sega will use their distribution network and maintain control as to its terms. Existing book publishers like Macmillan and Thomson Hall will join in two or three of the platforms. They will likely publish MPEG and MPEG titles with some SegaCD format for the end.

Developers will join in them out of necessity much in the same manner that writers have to book publishers to get into print. And the publishers, in turn, will make their fortunes based on choosing the right titles to release.

Predator 3000 — Why not? James Davis said it. The market leaders will be Time Warner, Microsoft, and Philips. ■

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bookreview

Updated Dictionary Explains New Terms

BY CHRIS METTON

Title: Computer Dictionary
Author: Dennis Gilman 1994
Publisher: Microsoft Press, Redmond, WA
Price: \$29.95

For some time, I have been looking for a dictionary of computer terms, but none contained the many new words and acronyms that have joined the English lexicon in the last few years. Microsoft Press has just answered the need with the second edition of its "Computer Dictionary." It has been completely revised and updated with many new definitions and illustrations.

The most noticeable feature of this dictionary is the depth of the explanations. Instead of just a brief definition, the jargon and lingo it marks is described for each hard ware component, in plain, easily understood, English. Software and communication code acronyms described with similar clarity. Some definitions are accompanied by drawings, photographs, or diagrams.

Subjects covered include: memory; computer upgrades; desktop publishing; computer security; e-mail; applications programming; data storage; hardware; printing; networks;

graphics; electronics; systems software; and communications. There are many new information leading the reader to related topics.

- Appendices contain the following tables:
- ASCII Character Set, showing decimal and hexadecimal equivalents.
 - The IBM Extended Character Set, with decimal and hex equivalents.
 - The Apple Macintosh Extended Character Set, showing characters and symbols like ASCII characters (128 to 255) in Times, Geneva, New York, Courier, Zap Dingbats and Symbol fonts.
 - The EBCDIC Character Set, with decimal and hex equivalents and mappings.
 - Numeric equivalents for numbers in decimal form (10), hexadecimal (base 16), ASCII (base 8), and binary (base 2). These equivalents can be very useful and are often hard to find when you need them.

The book contains 442 pages and weighs over 1 1/2 lbs. It's a "big" reference it is an addition to your collection of computer reference materials. ■

Chris Metton is a Vancouver-based technical writer.

This Old PC

BY RUTH SCHREIBER HOBBS

Title: This Old PC
Author: Dan London
Publisher: 386 Data Press
Price: \$19.95
Pages: 400
ISBN: 0-896-110-12-7
Available: everywhere

In the ever-changing world of the computer industry, don't let constant people pointed by man the latest and fastest machines possible. Problem is, most people have already invested in a computer system which is slowly becoming obsolete, but don't want to throw it all away considering its expense. That's where this book comes in, telling you what you do to salvage your old PC.

The nice thing about this book is that it is designed for people who want to upgrade their system, but don't necessarily know what you do get around it. Why? So while you may have been thinking of getting you a new, bigger hardware to speed up your DOS spreadsheet program, this book will rightly tell you that what you really should upgrade is your CPU and memory. Because DOS spreadsheet programs do not use your hard-disk extensively, and are col-

located by the CPU directly using a register in its RAM. There are other books available on this subject, but they are not all aimed at the novice computer upgrader. This Old PC comes with a single 3.5" diskette with several programs that will help you determine the current state of your computer to help you determine what should be upgraded and a few utilities designed to increase system performance.

This Old PC tries to be thorough, covering everything from things like how memory upgrades in terms of your PC into a multi-words computer. There are also sections covering the latest technology like how to install Pentium and OneDrive chips, Removable drives and superdisk-optical drives. There are a couple of drawbacks however, it often specifies brand names (like when when you would do just as well, and often does not give you details of an idea on how to do why you should configure your software to match the hardware you have just installed.

If you are looking to improve your old system, willing to take a hands-on approach to the problem, but don't necessarily know where to start, consider getting this book. ■

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bookreview

Protecting Your Computer Against 'Attacks'

BY KEITH SCHENGLI-BOBETS

Title: Computer Security Basics
Author: David H. Plesent and G. I. Bergeron Jr.
Publisher: O'Reilly and Associates

Title: 00185115
Before: 448 pages, \$52

It might just be years from now that there's a lot of discussion in the computing community about safeguarding information and keeping it

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by malicious hackers. You only have to remember cases like the San German hackers breaking into America's military database (as portrayed in Clifford Smith's *The Cuckoo's Nest*) in the past year to be convinced about the serious nature of computer crime.

But the type of computer crime that catches the headlines are only the tip of the iceberg. Most computer security problems never reach the newspapers because admitting that a computing system is insecure can lay businesses open to financial ruin. Also most computer crimes are done by insiders who have ready access to data and computer systems. Proper computer security means taking care of internal as well as external computer security. That's where this book comes in.

If you're in charge of securing a computer system and are not already paranoid, you probably will be after reading this book. It lays out the types of "holes" that you can come to expect, and what you can do to guard against them. The book gives lots enough detail to give you an idea of what you're up against, but not enough to become a "how to" book for malicious hackers. It covers the basics of how to take preventative measures on your systems, from login procedures to data audits, encryption standards and determining who should have access to data.

It also devotes a chapter to "Virtual and Other Myths", looking at the common ways that book hackers use to break into systems. It is probably the only book readily available on the security systems used by U.S. and Canadian governments. In fact it speaks for too much time to this area, but it will prove to be interesting to those looking for standards on how to keep data from leaking outside of your computer.

Originally published in 1992, it is not right up to date with some of the newest developments, like the "chipper" chip in U.S. government satellites that would allow (theoretically) to "listen in" on all encrypted transmissions, but will provide the user with many tips on how to keep hackers out of their computers. ■

Contact: O'Reilly and Associates 1-800-998-6939
 4800 G. Ireland Avenue, Orefield, PA

Wow: Basic Help For Photoshop

BY KEITH SCHENGLI-ROBERTS



Wow: The Photoshop Wow! Book: Over 1000 Tips & Techniques for Adobe Photoshop 2.5
Advanced Edition

Author: James D. Jones
Illustrator: Photoshop Press Inc.
Price: \$49.95 (October 1993) 380 pages, 480 color plates, plus 207 photos

Addict Photoshop 2.5 for the Macintosh is one of the most powerful image editing programs around. This also means that for many people it is one of the hardest to master. This book is a good introduction to what can be accomplished with the program and will also serve as a good reference for experienced users.

It is filled with useful information. It starts out with the reader taking the necessary equipment for your files, and continues from more complex tasks like how often they actually handle color images. Further chapters step you through the use of masks and channels, how to enhance photos, use filters, and do effective messages. The book also shows you how to going with Photoshop, use special effects in your images and how to add depth and motion to your compositions. It teaches you the steps needed to create an effect, an idea usually shown posted by pictures illustrating each step in the process.

One thing this book does not lack is pictures. The book is filled with them, many done by professionals and others also work with Photoshop. All the steps and how to use it is shown in pictures. And for once, the text does not take a back seat to the pictures as the text is well written and concise. The book is presented with helpful hints and tips on how to get the most use of the program.

The chapters that cover with the book contains a few useful supplementary programs to Photoshop, including some filters, a "color checker" program, and several other useful utilities.

Whether you are looking to create an all-inclusive photograph or create a simple website on your Mac, consider getting this book. It will help you to get professional-quality images while using Photoshop. ■

Contact: Jones D. Jones, Editor, (905) 298-8874

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BY JAMES MACPAILLANE

Checking Out The Musical Underground, Internet Style



As representatives called the Internet Underground Music Archive (IUMA) the closest thing to a place where station 13.9 can go, like real radio stations 13.9 give anything to bands that most otherwise only get on the air. But the music they have in their library didn't get on the radio. Instead it's downloaded by users via the Internet.

IUMA provides an alternative marketing channel to small bands. It will create a downloadable information set of the band including a text file with biography and ordering information, a diagram which acts as the cover art, and up to five minutes of

digital music. All songs are sampled with 44,100 samples/second (44.1 kHz) and 16 bits, in mono (but a new CD quality, then compressed from 13.1 to 16.4 kbps) using the original's audio quality using the MP3 lossy compression standard. According to IUMA, MP3 provides like lossless audio. Two new MP3 sound players and the right hardware to play back the recordings.

IUMA is run by Jeff Patterson and Robert Lord of Santa Cruz, California. It caught up with them via Internet Email.

The Computer Paper Can you give some background information about how the project got started and what kind of bands are posting in material.

ROMA: The project got started when Rob found out about the MP3 format. He had always been a part of his to station being about the music, making as he goes it, and he wanted to be a good way to do it.

We involved IUMA, standing at the end of our to Internet, and I wanted that with this computer, making it, I want just my band, the Ugly Mugs, on the net.

MP3 allowed us to compare and to around 13.1 it without much noticeable sound quality loss. As soon as it's there is no loss in quality.

I found that I wanted to put up based on the net and start a standard for others. We had to follow the way (thinking the same thing) only he had the time to start an archive where bands could keep their music for people to retrieve. Thus, the IUMA was born.

In fact, most of the bands are college bands that are playing shows in their local area. There are a few exceptions though. Margarette Kim is a new-style folk singer who has two CDs out on her own label. She is helping an old-timey album about 1950s to 1960s. And the band Death-A-Go-Go is former SCO employees.

Most of the appeal seems to come from the college crowd though. They're more than just college music. They're Ugly Mugs, the Margarette Kim (1950s to 1960s), the Ugly Mugs (1950s to 1960s). We are expecting the

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styles to become more more varied as this whole thing develops.

TOP: I know it's probably too early for this (UMA was written in November 1993), but have you received any feedback from bands on the effectiveness of this distribution technique?

UMA: The only band I can tell you about here is my own, the Ugly Mug. So far, we've received about 10 inquiries from people all over the world. I expect that, right now, I refer through our site less frequently than I did at the time we set up an MP3 player for other platforms, are more available.

TOP: Could you give me some idea what the rates are for the posted files and online packages (including postage, etc.)?

UMA: The sound files run anywhere from 1MB to 1.5MB. The "White Fly" ("Virus"), which is a short song recorded in Texas, is only 1.5MB. It is a song in its own right (you can expect it to be better than the one we're sending). The price is usually only \$9.95, for the entire package (see my website from 1MB to 1.5MB). This includes the song, a pic and a text file about the artist. In order to ensure that the songs are usually around 1.5MB.

For comparison sake, we use the MP3 audio compression algorithm. It is a more advanced way of compressing music because it takes into account psychoacoustics. Therefore, it can cut out information that your ear will never actually hear. It is the best audio compression method we have found so far.

TOP: Could you give some reasons where people can obtain MP3 audio players?

UMA: We are trying to keep all free and shareware products available at our site so that the only one we're actually receiving is from a company called 24mg which makes a freeware player for Windows. Amiga Corp. has Macintosh CD and Audio players, and we are still looking to them about shareware releases. For the time we have found a few people making us their own MP3 decoder. More notably, Tobias "Dropt" Harding from Germany is creating some pretty cool.

TOP: What is the cultural significance of this technology? What is it doing for small independent artists and how will the large corporations react?

UMA: Our aim, by using this technology, is to change music distribution as we know it. Even if UMA doesn't accomplish this task at least we are showing people that free distribution over long range while on an actual material product is possible (we are donating this fairly with little commercial appeal and no money can reach those thousands (millions) of people who might be potential fans).

No longer is it solely up to the commercial industry to judge what kind of music people will love. A band that never does their own thing can now have fans all over the world.

If someone likes one of their artists and wants to buy their CD to take all the money given directly to the artist. There are no longer three or four different parties along the way who each take a chunk of the take. Since we're taking any profits, they direct to either "commercial" music or else down.

We've heard that some of the industry gents went as far as the picture which is unbelievable. If we introduce this con-

cept and it catches on, their whole industry would be affected. At least that is what we are hoping.

TOP: Are you the first digital "pirate nation"? Do you think of yourselves as this way?

UMA: Well, not really a "pirate" nation. We are more of a digital public radio station. We'll have my group of all and we are not involved in the transfer of money, but we're not really competitive in a real sense.

I guess we are more of a case between a radio station, a label, a distributor, a music

store, and an art gallery. We don't really distribute, but we do make the songs available for people to come and get. Right now, I am not sure how we would be classified. As far as I know, we are the first group to set up a distribution source for bands who don't already have a label out.

TOP: It seems odd, especially with technology like local compression on the basis of becoming affordable!

UMA: I do it up for myself. We were thinking that it might eventually come to that, but I think we'd rather just stick with

music. If we don't get into video, I'm sure eventually we'll figure out if it makes sense for a label to record their music as opposed to a video. If we did have video, we wouldn't stop the music only website. I imagine a video website on separate place altogether.

Also, in case you are interested, we will soon be added to MTV.COM, Adam Curry, an MTV veteran, which we wanted to link our site to his. So, when someone is using music to go to the site, there will be a place for MTV.COM where they can click and be transferred to MTV. ■

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BBS Scanning

BY JAMES MACFARLANE

Toronto-based **Ayghem BBS** has extended its service across all of North America by providing a toll-free 800 number.

For Ayghem BBS owner John Howard the benefits are obvious — it gives his BBS an instant North America-wide reach. The drawback is that toll-free numbers are only toll-free for the caller and not for the recipient. Figuring out how to make the BBS profitable was a little tricky for Howard.

But Canada's deposit for the 1-line 800 number has soared to \$3,000, plus \$300 a month for the toll-free service.

Howard hopes to offset this expense by adding it to the cost of long-distance subscriptions. The BBS can be called directly from the 700 and 400 area codes, but those calling on the 800-number must lock onto an additional \$25 on top of the \$45 weekly service charge fee and also have to pay expenses between 40 and 60 cents per minute for long-distance time.

Ayghem BBS can be reached at (416) 231-1430, (416) 231-5113, (800) 664-4104. All lines are full-standard high-speed.



BBSing in high resolution

To access the BPS capabilities is switching to BPS stands for Remote Imaging Protocol and is allows BBSes to see quickly and Vbit-quality graphics in user's screens or screens. BPS allows BBS operators to implement graphical interfaces without buying special BBS software.

While most BBS packages now support BPS, most have simply added a graphical layer to their existing text screens. One Toronto-based BBS, CyberCity (416) 939-4232, has designed their entire BBS around the idea of using a graphical environment. Instead of waiting through screens full of unresolvable text, are presented with a simplified map of the city. This can go anywhere with the click of the mouse.

Compare the ease of printing a business card to the ease of printing a "CyberCity" card, or adding new print items to a list of documents. Where it's all laid out and presented graphically, only one or two lines BBS can use the system effectively.

CyberCity is also one of the few BBSes to be able to offer its own database complete with high-resolution pictures. The images are compressed and downloaded to the user's screen. Downloading, decompressing and viewing each picture takes about 30 seconds (and a full web 24-color).

They use a product for image BBS called BBSnet that provides the database access, which is automatically sent back, rather than graphical. The database is used to store all multimedia files, the Command Line interface is a text box that the operator drops in or from which BPS whether back into text mode in order to view the pictures.

Digital sound pictures

If you were lucky enough to get a TV when used for your machine this Christmas you already know you can watch TV on your machine and that's what's been made for you.

And right. Now you can do all of that and add your TV to the machine without having to start to that way too digital video sound picture. If there is a new service that provides video, they should be able to do it.

U-View costs \$11 a month and is available for stations in the Toronto market, as well as other cable stations. For CTV.

Call (416) 931-1893 for subscription information. ■

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MULTIMEDIA REVIEW

Underwater Multimedia for Youngsters

BY KEITH SCHINCILLI-ROBERTS



Title: Undersea Adventure
Manufacturer: Knowledge Adventure
Recommended System Requirements:
 386SX (preferred) with 32MB free hard
 128K free free-diskette access
 monitor with a mouse is recommended
VGA files:
 320x200 for children version
 640x480 for adult version

Multimedia promises to become a powerful tool in education by making learning fun. Parents looking for an offbeat title will find the educational program for their children should think of Knowledge Adventure's *Undersea Adventure*.

This is one of very few educational programs that does not require a CD-ROM drive to support it — though you better have plenty of free space on your hard drive to fit the 11MB file you'll need of you decide to opt for the version available on diskette. It is also available as a CD-ROM that places less stress on your system's hard drive.

The program allows the user to test the program on either DOS or Windows. However, once it has decided to run the program on DOS, you will need a Windows-capable PC, as it is because of the large on-screen graphics it needs for the animation sequences.

There are plenty of animated sequences, and if you have almost any type of sound card, it has a delightful array of appropriate aquatic bubbling, chirping and slopping sounds. All of the pictorial sequences are accompanied by spoken and written descriptions, even the per se schooler to follow along.

There is plenty to make this program. You can explore the 3-D Undersea World, where

you travel through an aquarium and learn about the creatures inside it. The 3-D World also has a lecture mode, where the user can watch for instance, while watching predators.

The other learning games are all matching games. In "What's Left?" where you match the predator with its favorite prey. "What's In It?" is where you are asked the name of a particular sea creature. In "Can You Find Me?" challenging you to match the name of a sea animal to its picture. Just for fun, you could take in a show at the Undersea Movie Theatre, where you can watch a short film on a shark, porpoise or any of the other sea animals listed.

This multimedia "adventure" is filled with the promise of sound and pictures that young children enjoy. Lack of depth-two has been noted, as its main drawback, is that children will likely get bored with it quickly because it is not challenging enough. However, in parent's real world use, I did with a neighborhood young children.

The elementary school-aged children who get the program through its parent approval is a good reason to test it again and again. It can be helpful to the children in their homework as they learn from the program can be printed out for school projects, and young parents can enjoy exploring under the sea with the safety of their parent's home computer.

You can expect multimedia to become more prevalent in the educational system. Parents who want to involve their children in the fun of learning through multimedia will find it hard to go wrong with this program. ■

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INTERVIEW

Pen PCs Help To Out At 94 Commonwealth Games

BY STEVE LYNETT

Medical staff working with athletes at the summer's Commonwealth Games will be making a significant break with tradition. They're testing in Toronto and Surrey if their paper forms for a valuable new source of electronic information gathering.

Dickson and Garson at the Victoria B.C. games will be recording health data and medical findings on state-of-the-art, pen-based computers.

Originally first use of a clipboard, the new computer allows the operator to use a special pen to make or draw on an electronic notepad.

The unit does not have a conventional keyboard. However, a key-board image can be called up by the screen and manipulated with the computer's pen.

Doctors planning for athletes can during the hectic 10-day games use pen-based computers to capture a significant breakthrough in medical record keeping. And if health tests are any indication, they expect the system will be faster and less error prone than traditional methods.

Dr. Richard Dickson, Chairman, Athlete Medical Services, Victoria Commonwealth Games Society, says, "A big problem with traditional computerized notes is the need for an intermediary. Input during those days just aren't protected enough with computers. We'd like to see, they're slowed down because they tend to cost too many words."

The pen-based computer will change the way information is gathered. Most data will be entered simply by tapping on screen prompts, but the computer will also recognize and convert handwriting, all electronically.

Less of a risk with little opportunity to learn the highly resistant staff who will be using the new equipment — BSA's Randolph TIGET. Provided by an IBM 486SX/25 MHz microprocessor, the notebooks are being supplied by game-sponsor IBM Canada Ltd.

Initial costs have been that waiting with the computer's special pen on the screen makes little sense in writing on paper, the result of a unique existing process used on the glass. The system for digitizer makes pen strokes appear almost immediately. The built-in display can be used in any light, indoors or out.

About a dozen Medical PCs will be in use at the Village Medical Centre and selected sports venues.

Software for the games was developed by Steve Skelton of the University of Victoria's School of Health Information Systems, working in a co-op student for the Commonwealth Games Society. Using a software

development system called Novarc's from Prototype Software Inc. Skelton developed the application in less than two months.

During several pre-games medical staff will record most patient information simply by tapping data pen buttons on-screen prompts — including area of the body, type of injury and treatment. Little actual handwriting is required.

On day's end, information gathered to the Medical PCs will be transferred to either a standard PC or a network for analysis. Detailed reports will be generated for use during the current games. And, if medical staff have their way, a full report will be available to help plan the medical requirements of future games.

During the first trial run at a Vancouver community hospital, the system was used by a physician, a nurse, a physiotherapist and other support staff took part in the test.

If the Victoria games test proves to offer the same medical staff hopes, it could set a standard for future events.

Says Dickson, "We've not started planning for Victoria, we had statistics that only a few games, but they were not planned in a conventional fashion. The information was incomplete, but not very comprehensive."

The University has not yet decided just one example. "We have to also have some kind of a way to use of the last games," he says.

Dr. Dickson also talks about thinking, "We've got a lot of medical complaints, we can get an advance out on the sort of comments."

"That's a significant value."

Dr. James Smith, President of Medical Information at the School of Health Information Systems, is also enthusiastic about the new technology.

"The computer is still in its infancy and used," he says. "The computer will be the application and the software is a major application development tool."

"The ability to record images, sketches or simple drawings is great for a clinician," explains Smith. "Sketches in a medical record can convey a great deal of information."

While Medical PCs are in Toronto will be limited to data collection, the doctors involved will make greater practical.

According to Dr. Smith, the bulk of the medical profession has long felt a need for portable computers. "Medical professionals are constantly on the move. It would be extremely useful to have a portable medical device in meetings and at the bedside."

Steve Lynett works for a Toronto-based public relations firm that represents IBM.

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newsbytes

EXCLUSIVE NEWS

Interactive Titles Tested In Bookstores

NORF YORK — The first time you go to the bookstore, you might encounter "Interactive" and "Video" of a different sort than you would ordinarily expect.

Two major electronic publishers — The McGraw-Hill Companies, Apple, CompuLink, Time Warner Interactive Group, Macmillan, New Media, Creative Multimedia Corp., and Oracle Knowledge Resources — have launched a market test of interactive entertainment software in bookstores.

A Video Bookstore in Toronto is the only test site in Canada.

Contact: The McGraw-Hill Companies, 202-421-5000

Post-It Electronically

SCOT COLLINS, CO. — There you are, just given up on losing a post-it note because you didn't want to scribble around looking for a paper and pencil? Voice Technologies of Scot Collins, CO says you

will never have that trouble again with its credit-card sized notepad and playpen that also can a computer chip to take text any message.

The company claims its cost about a Personal Home Recorder can be used to quickly record the great idea that popped up during

the drive to work, and the idea to look in the refrigerator for their after-school snack, consider their grocery list items, and record sales leads without making notes and scribbles.

Contact: Voice It Technology, Inc. (800-695-1799) or (303-695-0994)

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Vigilant Watches Over Your Money

BY BRITH SCHENCKEL-ROBERTS

Vigilant Software has just released a new version of its accounting package aimed at retailers. Vigilant Business Software 4.0 now includes bar-code reading, bar-code printing and check-wedge credit-card authorization as part of the program, designed to an integrated account management system.

Vigilant provides an interface that is easy-to-use and sophisticated modeling basic accounting and inventory procedures applications. It can be modified to suit the needs of any type of business, and the number of different processing fields is limited only by available hard disk space. Users can easily keep track of current accounts, vendors, customers and inventory using Vigilant.

The only hard to miss data item — it is passed on by the program to all sales and then built, including the general ledger, which is updated automatically. When a sale is made at the cash register, it is automatically passed along to the other integrated inventory and accounting components of the program. Vigilant also keeps track of sales history, providing a complete breakdown of what was bought and when, along with inventory figures.

Other new features include the ability to track inventory by serial and lot numbers, deal with returned goods and exchange transactions, and the ability to process credit letters at the point-of-sale screen.

Vigilant Business Software version 4.0 is available for \$495 for a single user version, and \$495 for the networked version.

Contact: Vigilant Software (800) 333-6746

newsbytes

EXCLUSIVE NEWS

Software Suites More Popular

SOC 9051, CA. — For the first time ever, a business application suite has made it into the number one slot in market research firm Statquest's preliminary worldwide personal computer (PC) applications top 50 list of software titles. In 1993, in addition, the market for PC software suite applications saw the phenomenal growth rate of over 200 percent reaching US\$2.64 billion.

The number one software title was the suite of applications bundled together as Microsoft Office for Windows, listing most packaging application software. Word for Windows out of the application software list.

Statquest reports that suite applications market will easily surpass the \$1 billion mark in 1994. Microsoft earned \$241 million in worldwide revenue from software suites, while Lotus earned 148 million and Borland made \$14 million.

Contact: Statquest 408-431-4070 to 408-437-6382

Oh Waiter . . .

BOYNTON BEACH, FL (FC) — At your pool, almost everyone has been in the situation of having to wait in a restaurant for the waiter's attention. But now, at a couple of restaurants, customers are sitting down and no longer.

Microcode's new Table Paying system, being beta tested at two hotels in the Ft. Lauderdale restaurant chain, uses the laminated release of a sugar, salt and pepper shaker to let patrons discreetly send messages to restaurant staff.

The system involves several small buttons built into the shaker that, when depressed, causes the release a paper to either send or display the table number requesting attention.

Contact: Microcode Computer Control Paying Systems 800-362-5330

Unitel Comes To Manitoba

WINNIPEG. — Unitel Communications Inc. has begun offering long-distance telephone service in competition with the provincially owned Manitoba Telephone System in Winnipeg and Brandon, Manitoba.

Manitoba becomes the eighth province served by Telecel (based in Utah), leaving only neighbouring Saskatchewan and Alberta without competition in long-distance service.

The company got permission to begin offering long-distance service early in 1993, and launched its first offerings later that year. The original regulatory decision did not cover the three private providers because new telephone companies were still regulated by provincial authorities. Since then, Uni-

tel has reached an agreement to offer service to Manitoba.

The Canadian Radio-television and Telecommunications Commission (CRTC) has also given the company permission to serve Alberta, but because Unitel is unhappy with the amount it must pay to local tel-

phone companies there to subsidize local service, company officials say it is possible only large national customers that deal with Unitel in other provinces will be offered service in Alberta.

New telecommunications legislation passed earlier this year gave Saskatchewan a

five-year grace period to adjust its federal regulations, making it unlikely long-distance competition will appear there until late in the decade.

Contact: Unitel 800-888-8888

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16x	2400	4800	25600

As a comparison, look at these "double speed" drives. At 2x, they will achieve the 600KB/sec transfer rate. At 4x, they will achieve the 1200KB/sec transfer rate.

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EXCLUSIVE NEWS

Worldwide PC sales Growing

IAN KIRK, CA — According to Dataquest's preliminary 1993 worldwide study of personal computers (PC) market share, Compaq has the largest share (more than 40%) of PC makers. Apple Computer was number two and IBM still numbers one in market share among PC makers, made the 10th game in its market share since it began listing its sales in 1989.

Compaq easily dominated its revenue and increased its market share by 3.8 percent. The top five PC makers — IBM, Apple, Compaq, NEC, and Dell — gained a 3.1 percentage points over last year's figures to hold 44.1 percent of the total PC market. The combined sales of the 546,365 million PC market shows that IBM holds 12.4 percent, Apple has 11.0 percent, Compaq has 10.9 percent, NEC holds 7.7 percent, and Dell holds 3.4 percent.

Contact: Dataquest, 408-407-4833, fax 408-421-0090.

Computer Dummies In High Places

MICHAEL IRVING, C.A. — At the head of US and UK executives lead basic personal computer (PC) sales, according to a study conducted by Robert Hall International. The success of its rapid focus "hot" to "taste personal".

The survey asked 650 top executives in both the United States and the United Kingdom. In their opinion, what percentage of the nation's top executives is computer literate? The answer was 15 percent in the US and 35 percent in the UK, according to basic computer skills.

PC industry guru Peter Steiner, once vice of a copy about the time he joined an IBM executive at the executive level, made incredible insight. "The executive implied, 'I don't use a computer—I have a secretary.'"

Executives noted for computer literacy among executives include computer skills considered a low priority, indicated by

companies, discouraged due to the limited career ladder, incentive to change and a lack of time.

Contact: Robert Hall International, 418-854-8788, fax 418-854-8788.

DEC Canada Gets New Boss

TORONTO — Digital Equipment of Canada 144 got a new boss in January. It is Computer has reported that its president and chief executive of the Canadian subsidiary of Digital Equipment Corp. is to be succeeded by Ronald Larkin.

Larkin comes to the post from Australia, where he was for two years managing Director of Digital Equipment Corp. (Aust) Ltd. Prior to that, he had Digital's regional sales and marketing at DEC Canada. He came to DEC from IBM Canada Ltd. in 1987.

Connelly, who has headed the Canadian subsidiary for some years, will remain as DEC Canada's financial director.

Contact: Digital Canada, 416-887-0300.

Pentium, 486 Price Cuts Coming

SANTA CLARA — Intel, the major manufacturer of the families of 80486 and compatible personal computers (PCs), has announced price cuts for the second quarter of 1994 ranging from 14 to 36 percent on its Pentium and improved 486 microprocessors.

The microprocessor giant claims the Pentium is moving faster into the mass market than any other chip introduced in the company's history. This is despite reports that the Pentium is not working into the small channels as well as its anticipated market capacity for building Pentium processors on the part of Intel's key vendors for the lower prices.

Contact: Intel, 408-766-1438, fax 408-766-1432.

British Telecom Canada Offers Video

TORONTO — Claiming to offer greater use of on-line and interactive, British Telecom Canada has launched its Video-on-Demand (VOD) service, which allows customers to watch video on demand.

BT Canada's subsidiary of British Telecom 144 has the service will be used by groups of users who pay to receive messages. The service is available with a video card and a non-soft color monitor.

Contact: BT Canada, 416-882-0099, fax 416-882-0091.

Canada's Stentor Plans Budget Cuts

OTTAWA — Stentor, the national carrier of Canada's regional phone companies, is planning budget cuts in 1994 and may reduce its workforce.

Company spokeswoman Cheryl Evans confirmed that Stentor, made up of 44 regional telephone companies, will cut its budget by an unspecified amount in 1994. The financial part is a daily business strategy.

per in Toronto, recently reported that Stentor's 1993 budget was \$250 million. Evans said the number was "a guess" on the basis of past and Stentor does not make budget figures public, but she did not specifically deny the figure's accuracy.

Contact: Stentor, 416-970-0000.

Nintendo Turns To RISC

TORONTO — Three major Japanese electronics firms have decided to supply the 16-bit advanced processing unit in Nintendo. Using the powerful new chip, Nintendo plans to create a third generation of video game machines.

According to reports circulating in Japan, Nintendo is developing a powerful video game machine based on a 64-bit (million) transistor or computing (MIPS) processor. Sources suggest that the new advanced machine, which will be released soon, will be a 1994 will be the successor to the Super Nintendo series of games machine, using chip technology supplied by NEC, Toshiba and Sharp.

Contact: Nintendo, 416-754-6471, 6071, fax 416-754-6100.

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Q&A

[illegible]

Q: Is it possible to connect the TAD-1000 and clip on that reader with the PC version of CorelDRAW? Or can I use a Mac?

A: The answer is—maybe. Initial tests were very encouraging. Using Acc Software's excellent *ProDesign*, an entire batch of any number of PE boats comes with three checks of the model, which are as comprehensive, and even slower, as good.

The only sort of algorithm is that the screen images (i.e., used only if `WYSIWYG` macro is enabled) are pretty ugly. They could be hand-drawn, though.

Overall, it works remarkably
 close to a little less consistently. It is now

able to export the set from CoreDraw to a variety of file-compatibly formats (PostScript printers users should use EPS or Encapsulated format, while non-PostScript users could export the files as PDF files or GIF images).

This can be solved by using PacificData Software's *Transputer Fax* to generate a batch of EPS native illustration files to automatically add the pictures, but the resulting files don't exist from some programs (QuarkX-Press).

Strep. Mory sparsimaculatus J. Bourd.

Q—My new laser printer only prints part of a picture on the page. What's wrong?

A... Just because a printer is COMPATIBLE with printing at 300 to 600 dpi (or 3) doesn't mean that it's got enough memory to do so. You may not be able to print a full page at the maximum resolution of your printer without upscaling for extra \$440 per page-let alone. At the price of memory these days, that can cost a few hundred dollars extra.

Home & acre: A 2004-2010 period works well, as \$90,000 does not require much. Otherwise,

that requires a megabyte or more of printer memory to hold a full page worth of information. Most like a few lines printers, such as Hewlett-Packard's line-dot LaserJet 4L, use a special image compression technique to allow printers with only 512K of memory to print full pages of text or graphics.

memory for printing; ideally, lower-cost ink-jet and dot-matrix printers don't have memory problems either because they can print an image-line-by-line. Frustrating a single line at a time requires little or no pointer memory. A laser printer, at contrast, must image the entire page at once.

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Q&A

Continued from page B2

For example, we have a printer here at The Computer Paper that we normally upgrade to 1,200 dpi. We can get the resolution to any size of several variations — 400, 600, 1,200, etc. — from the LCD (liquid panel). Why? In reality printing at 1,200 dpi and what we come to is a job that really involves the margins of an 11x17 page. It simply means at 1,200 would require 1200 of memory (just for the page image — only lower RAM for operating system, fonts for the shell, networking facilities, etc.).

It is also to have an on-line capability, but graphics-intensive pages will have to be printed at a lower resolution until you install more memory in your printer. ■

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The institute was started by Honeywell, that which was trying to drive itself at the school. Three years ago, Morley, a 34-year-old owner of the company, bought it and went out on his own. Since then Morley has been building a reputation.

In 1990, the operation and began focusing on the students in technical. Since 1990, The Immersion has seen growth at 400%. This year it is located in a Computer



Education Center for commercial training and also operates a new school in Boston.

Students had their all within of the and Canada Employment a number of people problems. About 100 people an open night who is a computer analyst with a team, a 10-year old and computer who joined an engineering consulting firm and a diploma who is working with an organization that collects donations for the Third World.



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Information Highway Leads To Toronto

BY GRANT MCKENZIE

TORONTO (P4) — A number of high-profile speakers including Canadian Prime Minister Jean Chretien and US Vice President Al Gore, have been invited to a luncheon on the Information Highway for the Toronto at early October.

The conference — **Powering Up North America** — is being organized by the Information Technology Association of Canada (ITAC), a group of the large computer and telecommunications companies in Canada and the Canadian Advanced Technology Association (CATIA), whose members are largely smaller Canadian-owned high tech firms.

Miller Chretien, who Gore has officially accepted the invitation yet, but ITAC spokesman Barry Gault said the speakers are confirmed. He said the lineup of speakers, including a number of prominent names in the technology sector, should interest Gore, who has been an outspoken proponent of the information highway since 1992.

The information highway, bridge being the fastest rising business of 1992 to its benefits from a high capacity network.

ations schools that would carry data, voice, and video in the US. Gore has invited a National Information Infrastructure program meant to help develop this kind of highway. Speeches listed for the conference to be held at the

Interprovincial Toronto Committee. On to February 1 and 2, 1994. Budgetary concerns of politicians at the House of Commons Institute of Technology and a 10-point speaker on trends within and outside George G. Miller, Michael Hargrove and David Pearson of Bell Canada Ltd. 100 Marjorie, chair of the 91. National Information Infrastructure Toronto. Don Tapscott, co-author of the most technology books best-selling (1992), former federal Communications Commissioner (PCC) Chairman Alfred Sikes, and head of Microsoft Canadian and American high technology companies.

About 1,000 people are expected to attend. Gender said. Registration costs \$180 for members of ITAC or CATIA, and \$200 for non-members.

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